

FIG. 1

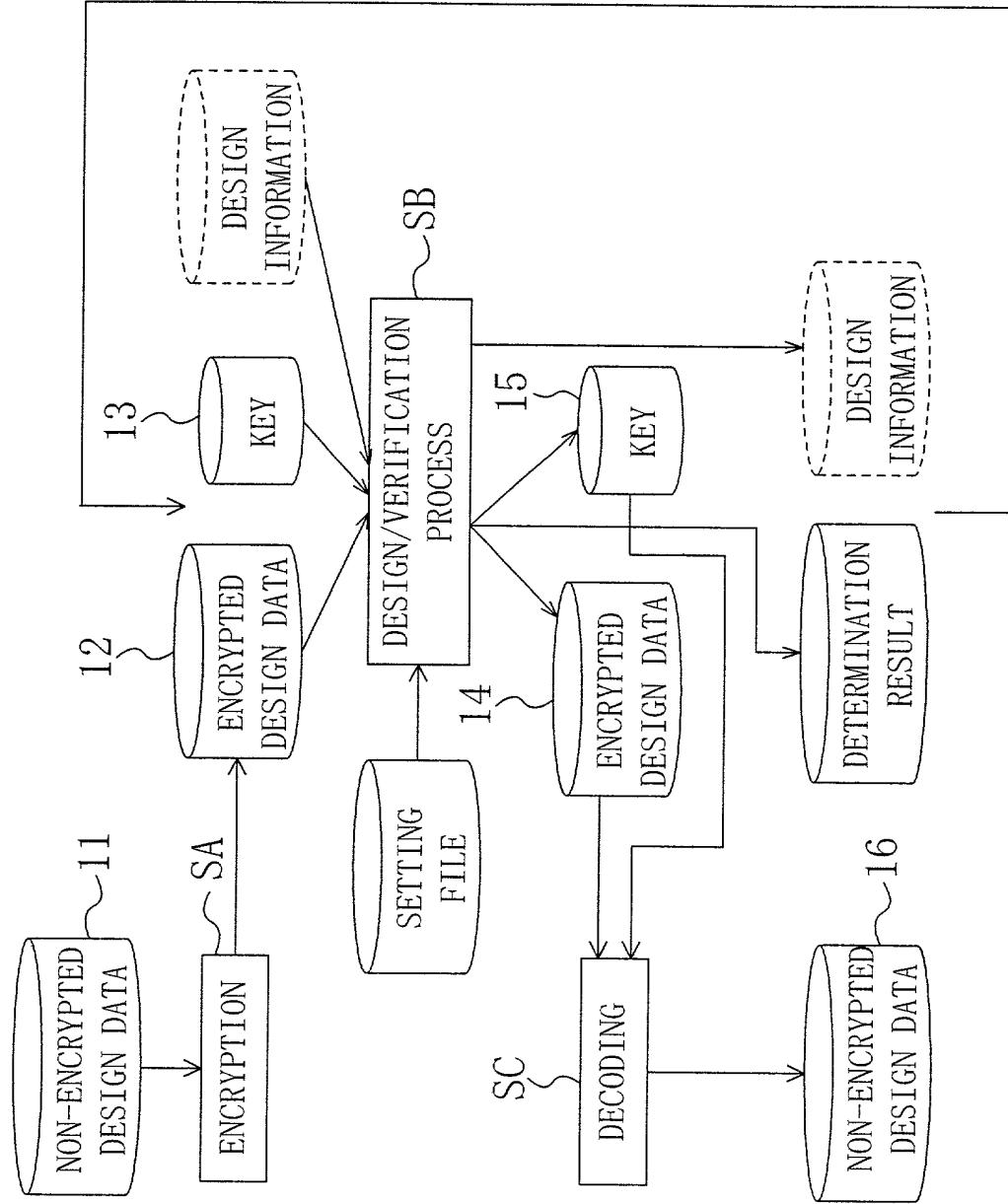


FIG. 2A

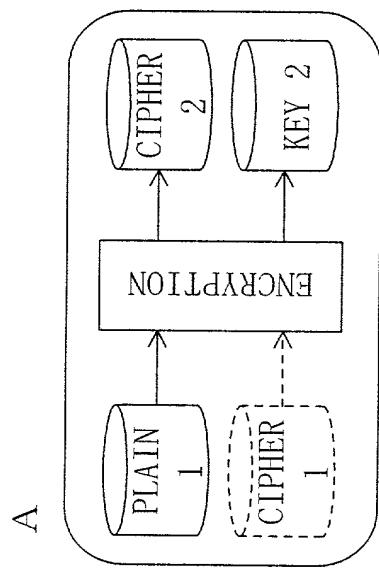


FIG. 2B

B 1 process of directly processing encrypted data

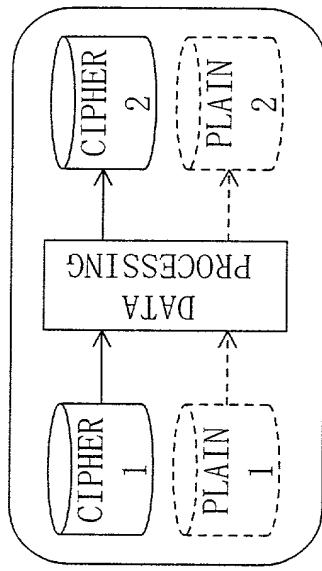


FIG. 2C

B 2 data conversion conducted with ciphers maintained

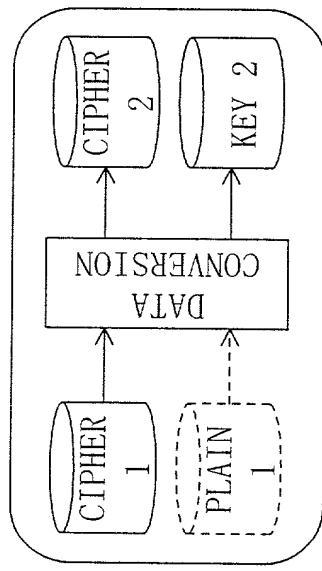
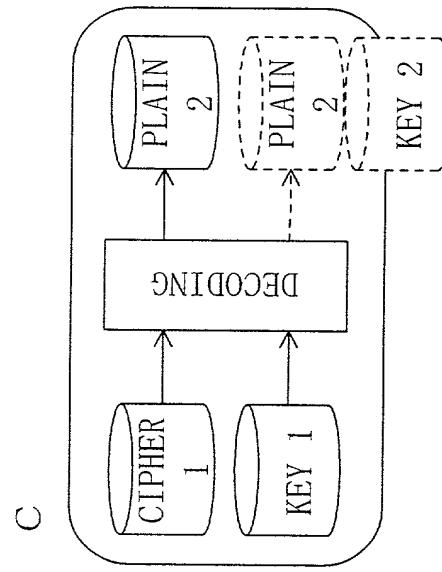


FIG. 2D



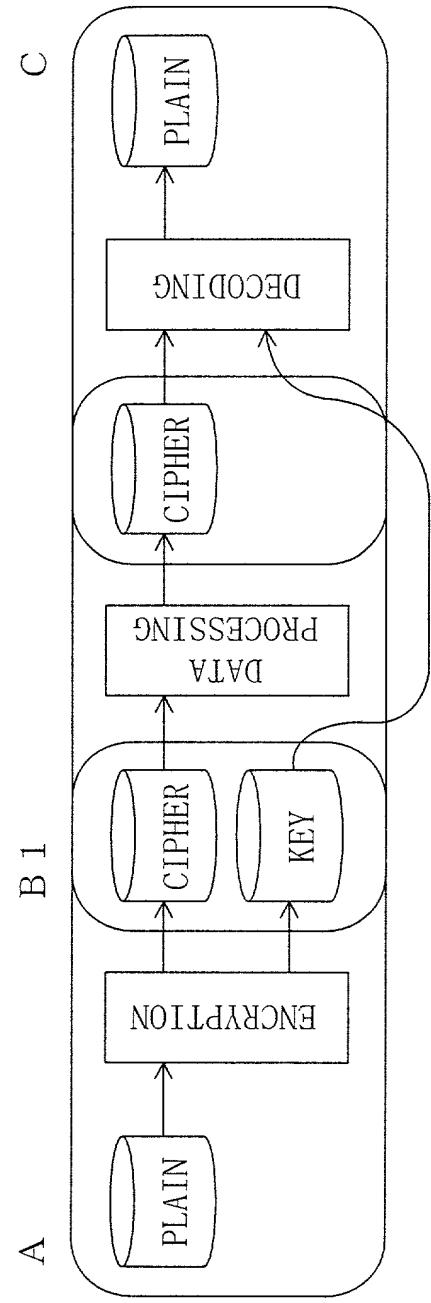


FIG. 3A

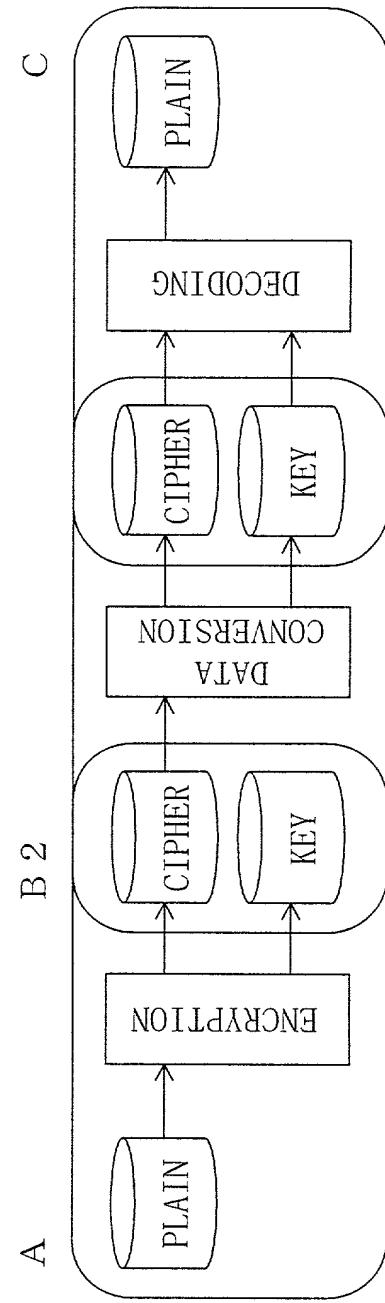


FIG. 3B

FIG. 4

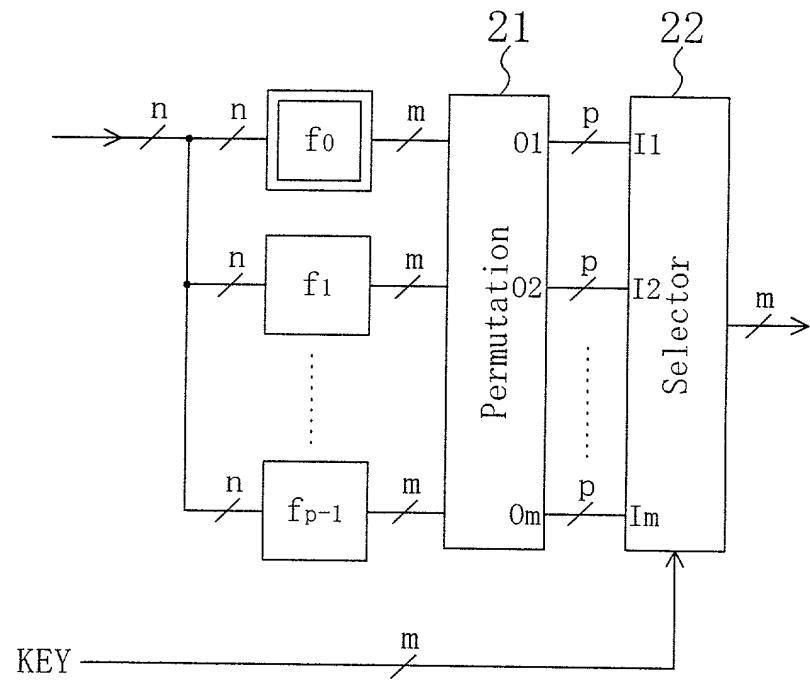


FIG. 5A
ORIGINAL CIRCUIT
 f_0

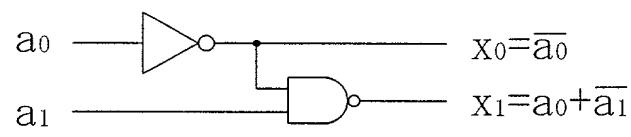


FIG. 5B
DUMMY CIRCUIT
 f_1

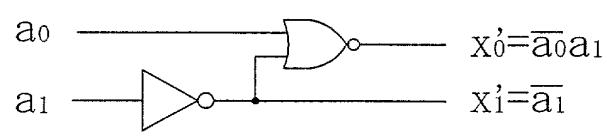


FIG. 5C

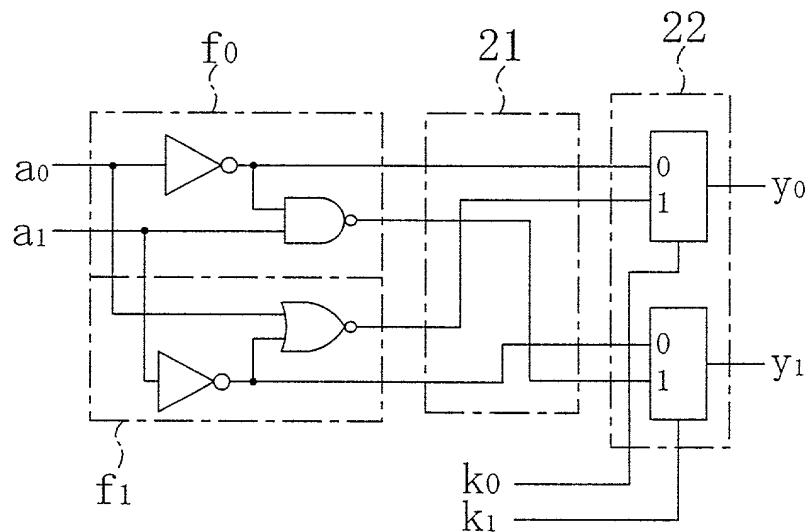


FIG. 5D

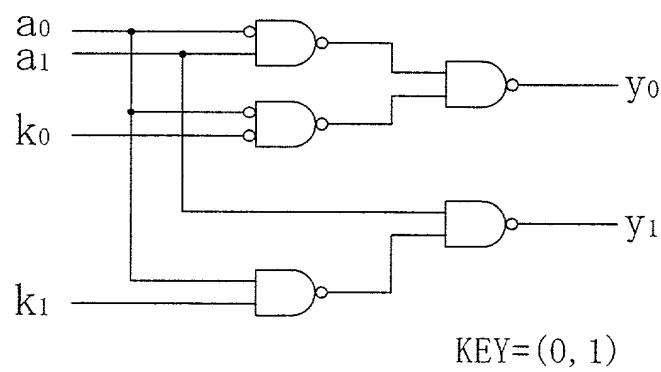


FIG. 6

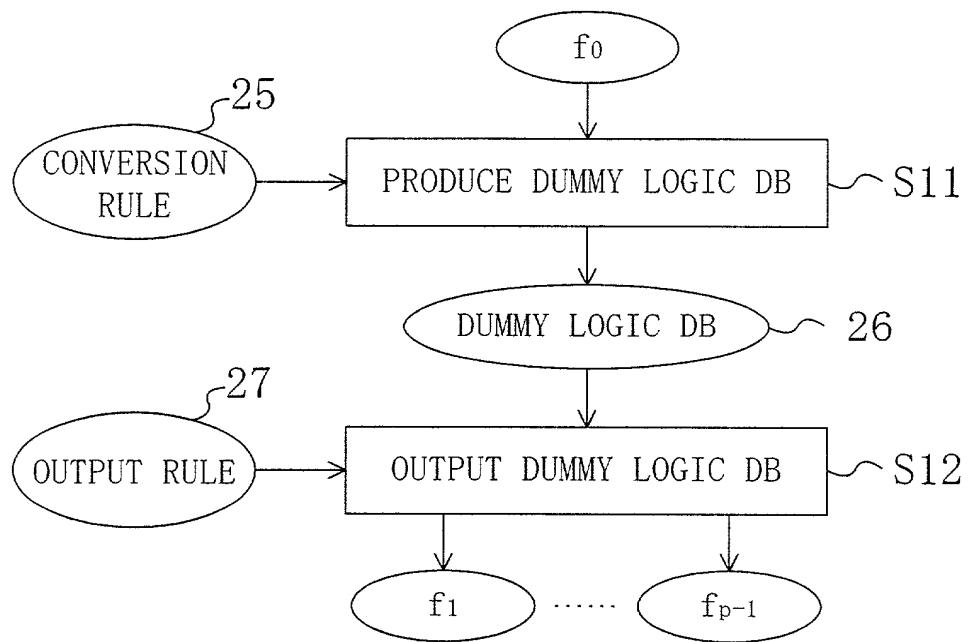


FIG. 7A

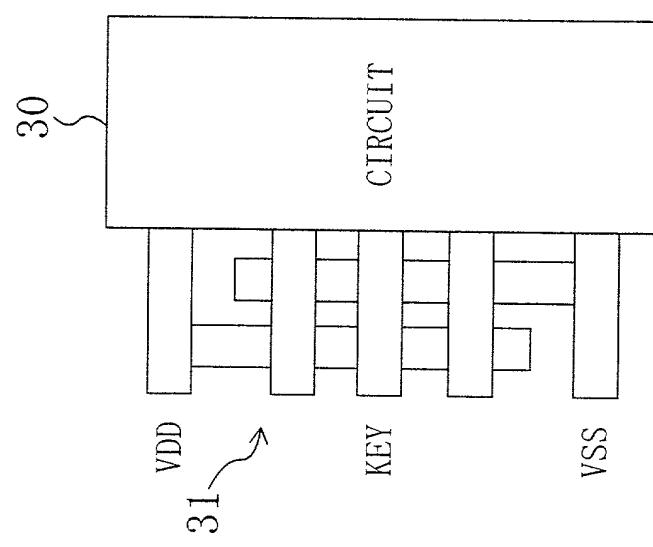


FIG. 7B

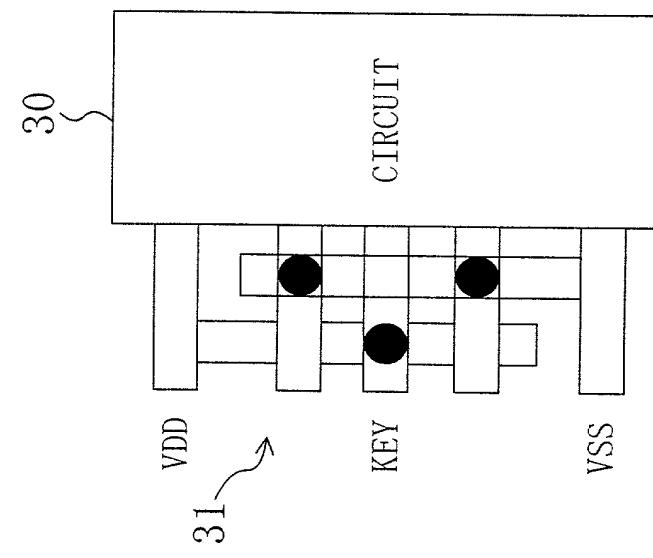


FIG. 8

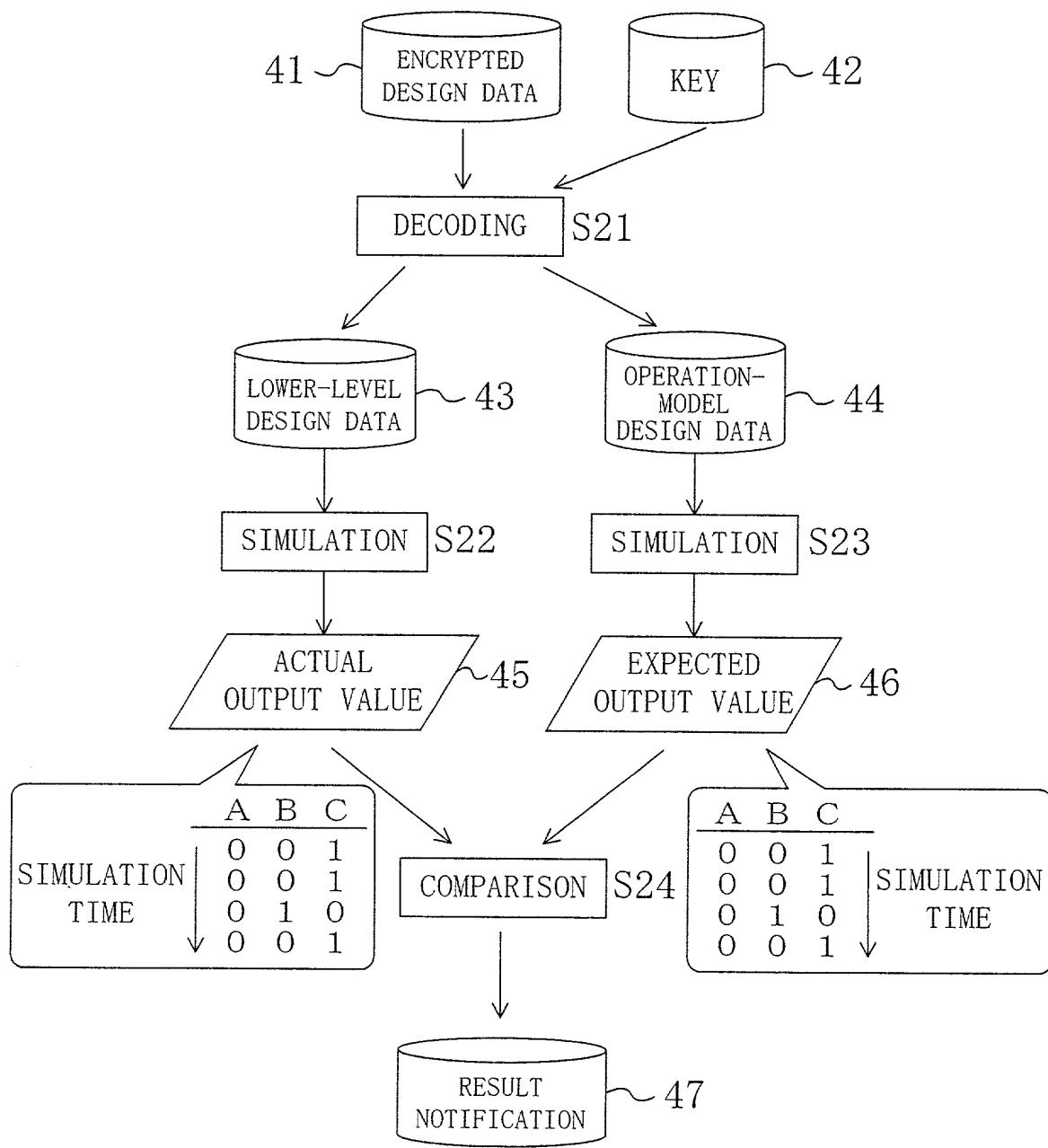


FIG. 9

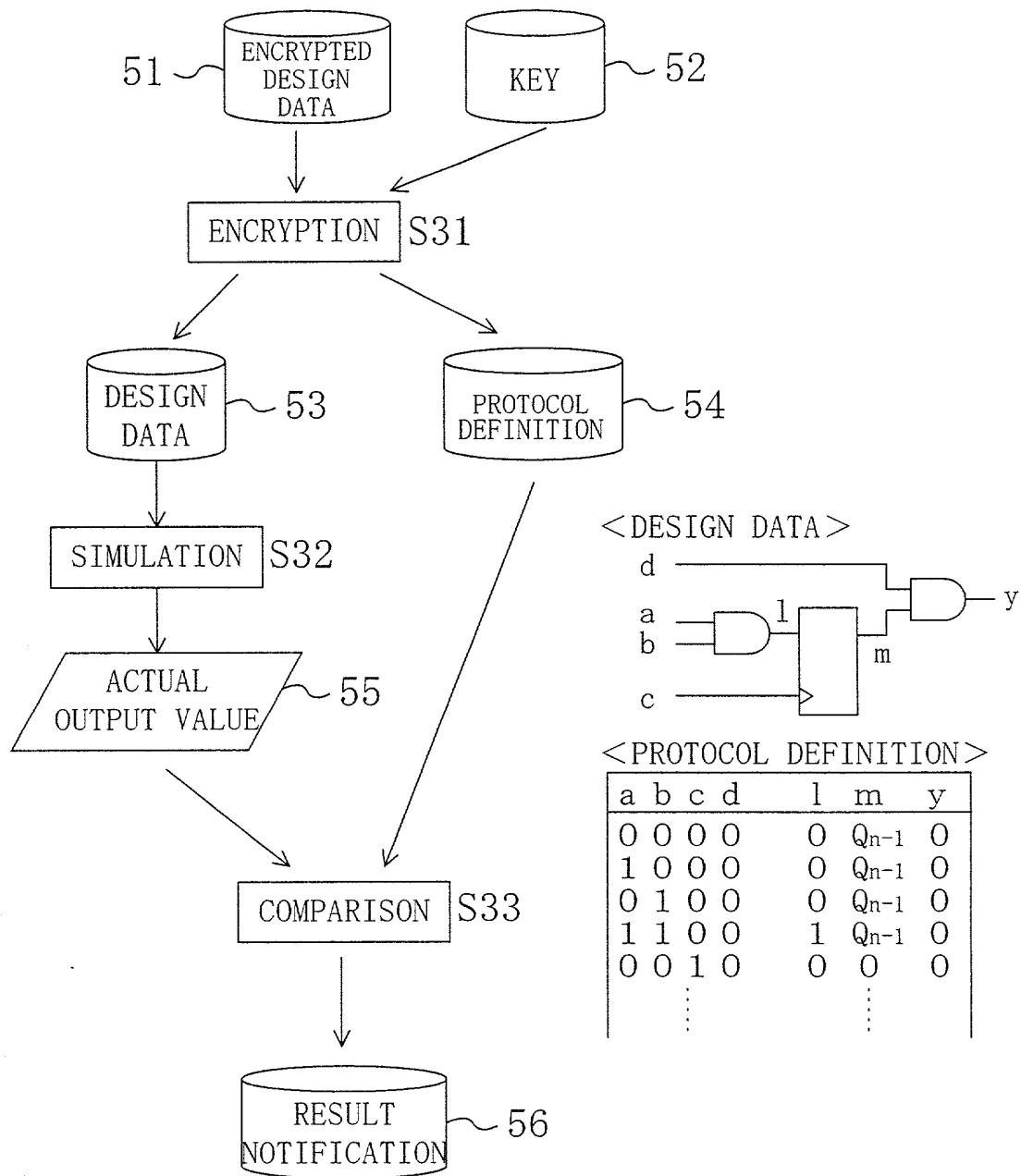


FIG. 10

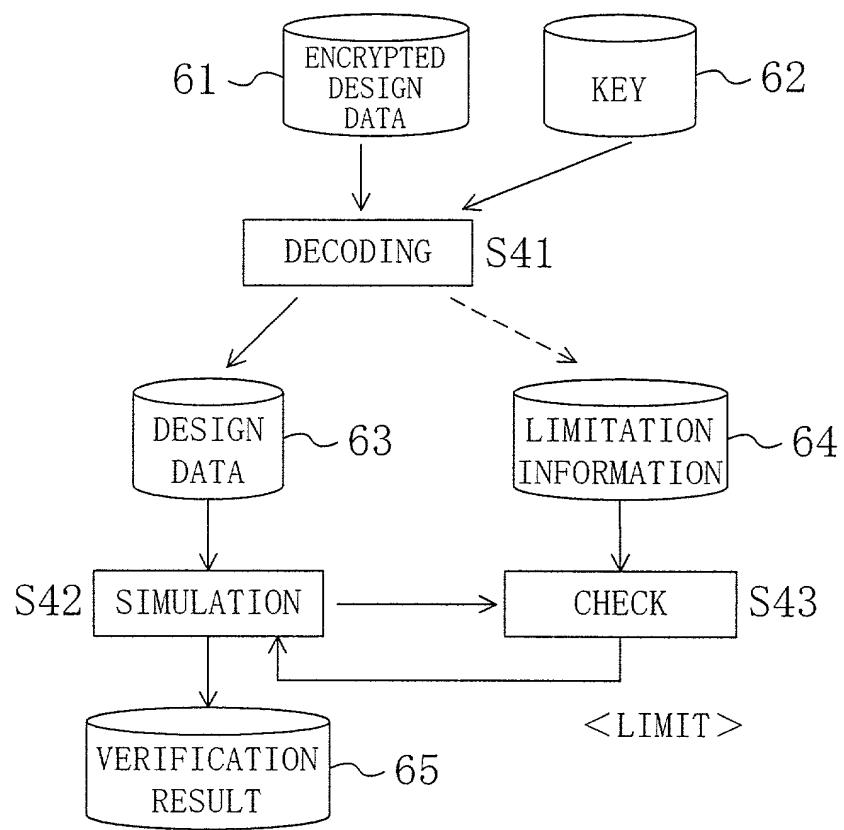


FIG. 11A

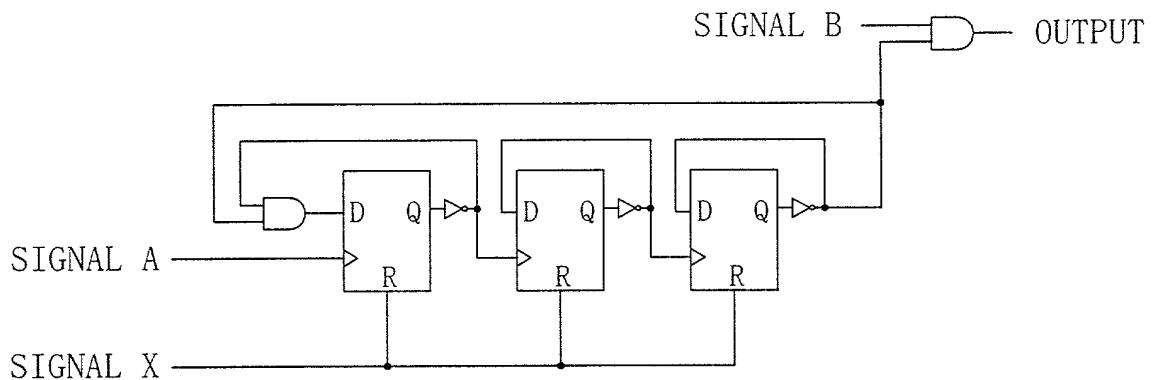


FIG. 11B

X	NUMBER OF TIMES A CHANGES	B	OUTPUT
0	1	0	0 } OK
		1	1 }
0	2	0	0 } OK
		1	1 }
0	7	0	0 } OK
		1	1 }
0	8	0	0 } NG
		1	0 }
0	9	0	0 } NG
		1	0 }

FIG. 12A

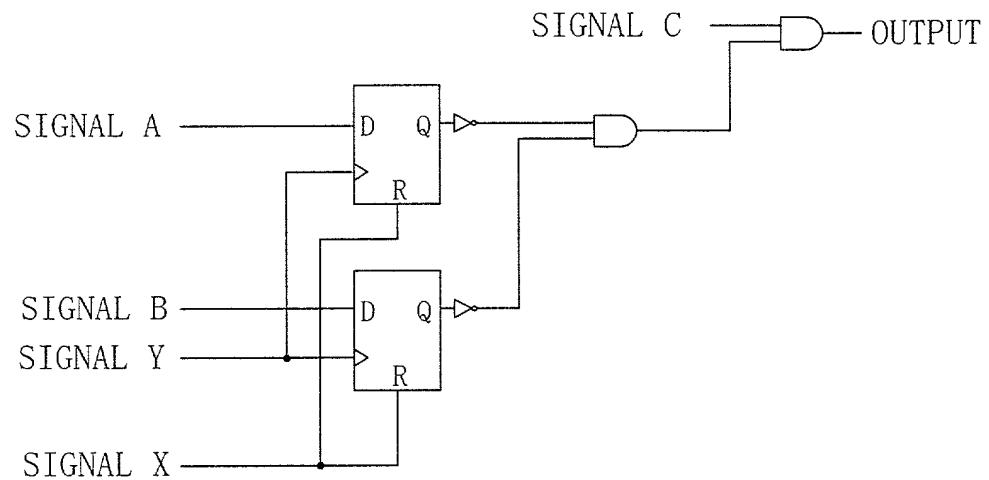


FIG. 12B

X	Y	A	B	C	OUTPUT
0	↑	0	0	0	0
		0	0	1	1
					OK
		0	1	0	0
		0	1	1	0
		1	0	0	0
		1	0	1	0
		1	1	0	0
		1	1	1	0
					NG

FIG. 13

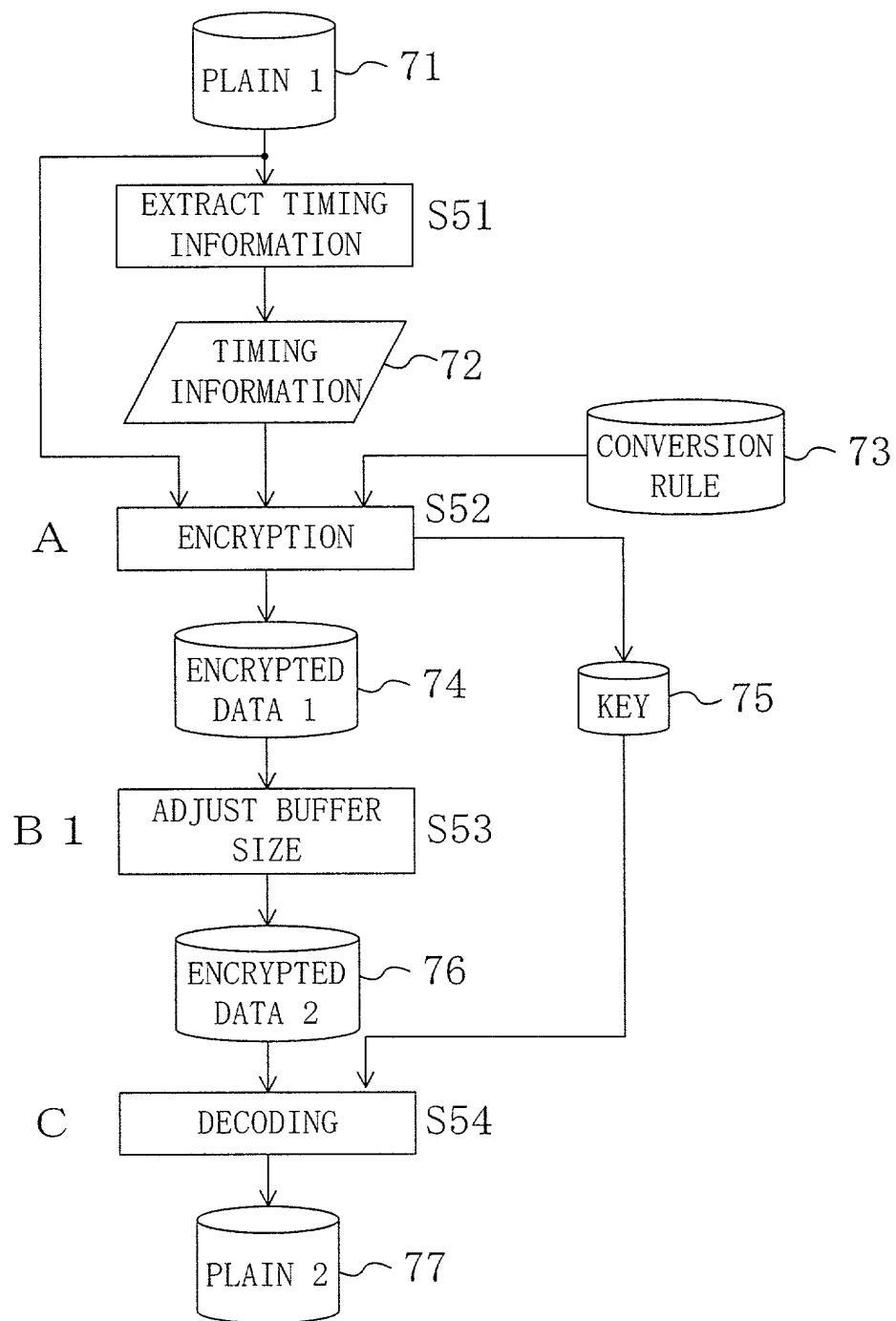


FIG. 14A

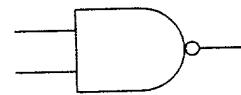


FIG. 14B

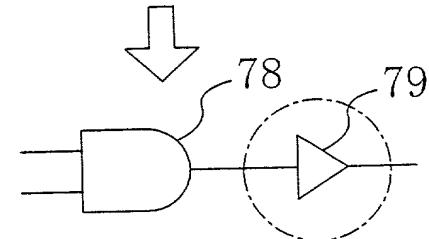


FIG. 14C

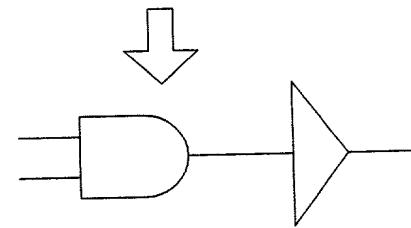


FIG. 14D

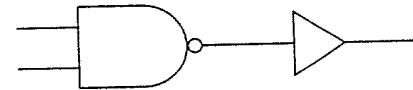
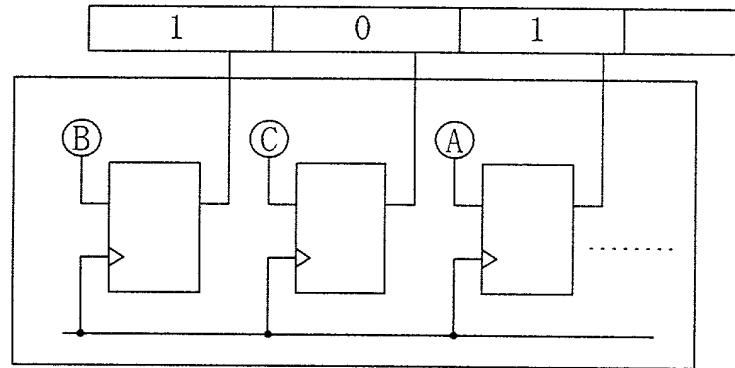


FIG. 15

CIRCUIT UNIQUE ID REGISTER



$$\left. \begin{array}{l} A = 1 \\ B = 1 \\ C = 0 \end{array} \right\} \text{UNIQUE PARAMETER}$$

FIG. 16

